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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,067	10/02/2003	Yojiro Matsueda	117390	7780
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EXAMINER				
DUONG, DIEU HIEN				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/676,067

Applicant(s)

MATSUEDA ET AL.

Examiner

DIEU HIEN T. DUONG

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date 05/01/2008
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This office action is a response to applicant's amendment filed 06/19/2008. In virtue of this amendment, claim 6 is canceled; claim 17 is newly added; thus, claims 1-5 and 7-17 are currently in the instant application.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 2-4 and 12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 2 has been amended to recite the feature "wherein at least one of the line forming regions contains lines chosen from at least two of the following groups: (1) at least two electric power lines of the plurality of electric power lines with different widths, (2) at least one scan line of the, plurality of scan lines, and (3) at least one data line of the plurality of data lines" in lines 18-21, which does not appear to be in the original filed specification (i.e. lines chosen from at least two power lines and at least one data line or lines chosen from at least two power lines and at least one scan line). Thus, the recitation must be treated as "new matter".

Claim 3 recites the feature "both at least two electric power lines of the plurality of electric power lines and at least one scan line of the plurality of scan lines being formed in at least one line forming region of the plurality of line forming regions", in lines 11-13, which does not appear to be in the originally filed specification. Thus, the recitation must be treated as "new matter".

Claim 4 recites the limitation "both at least two electric power lines of the plurality of electric power lines and at least one data line of the plurality of data lines being formed in at least one line forming region of the plurality of line forming regions", in lines 11-13, which does not appear to be in the originally filed specification. Thus, the recitation must be treated as "new matter".

Claim 5 is rejected since it is dependent on claim 2.

Claim 12 has been amended to recite the feature "wherein at least one of the line forming regions contains lines chosen from at least two of the following groups: (1) at least two electric power lines of the plurality of electric power lines with different widths, (2) at least one scan line of the, plurality of scan lines, and (3) at least one data line of the plurality of data lines" in lines 17-21, which does not appear to be in the original filed specification (i.e. lines chosen from at least two power lines and at least one data line or lines chosen from at least two power lines and at least one scan line). Thus, the recitation must be treated as "new matter".

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 7-11 and 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada (US 6,522,079 B1) in view of Yamazaki et al. (US 6,825,820 B2 of record), hereinafter "Yamazaki".

Regarding claims 1, 11 and 17, Yamada discloses, in Figures 5B, an electro-optical device comprising an electric power supply circuit; a plurality of pixels (PX1, PX2), disposed in the form of a matrix, including electro-optical devices driven by receiving electric power from the electric power supply circuit, the plurality of pixels (PX1, PX2) making up a plurality of pixel groups formed of a series of pixels arrayed in at least one direction of a row direction and a column direction, a plurality of line forming regions being formed between adjacent pixel groups of the plurality of pixel groups, and each of the line forming regions being formed with generally the same width; a plurality of electric power lines (VL1, VL2) to supply driving voltage to the electro-optical devices; and a first line forming region having at least two electric power lines (VL1, VL2) selected from the plurality of power lines; a second line forming region having at least one data line (DL2) selected from a plurality of data lines; wherein the first and second line forming regions are either both in the column direction or both in the row direction.

Yamada does not disclose the electric power lines with different widths.

Yamazaki discloses, in Figure 1B and page 6, lines 5-15, electric power lines with different widths.

It would have thus been obvious to one having ordinary skill in the art at the time the invention was made to modify the power lines of Yamada with the power lines having different widths as taught by Yamazaki in order to improve the brightness uniformity of the display device (col. 3, lines 62-67).

Regarding claim 7, as applied to claim 1, Yamada/Yamazaki disclose, (see Yamazaki, Figure 1B), the electro-optical device being a light-emission device and the electric power lines being formed with different widths corresponding to the emission light color of said light-emission device.

Regarding claim 8, as applied to claim 7, Yamada/ Yamazaki disclose, (see Yamazaki, Figure 14B), the color of the light which is to be emitted being at least one of red, green, and blue.

Regarding claim 9, as applied to claim 1, Yamada/Yamazaki disclose, (Yamazaki, Figures 14), the electro-optical device being an electro-luminescence device.

Regarding claim 10, Yamada/Yamazaki disclose, (Yamada, Figure 12), a electronic apparatus comprising the electro-optical device according to claim 1.

Regarding claim 13, as applied to claim 1, Yamada/Yamazaki disclose, (Yamada, Figure 5B; Yamazaki, Figure 14B), each of the line forming regions being formed in at least one direction of the row direction and the column direction with generally the same pixel pitch.

Regarding claim 14, Yamada/Yamazaki disclose, (Yamada, Figure 5b; Yamazaki, Figure 14B), grouping of lines that constitute each line forming region are

grouped in the same manner repeatedly in at least one of the row direction and the column direction.

Regarding claims 15-16, Yamada/Yamazaki disclose, (Yamada, Figure 5B; Yamazaki, Figure 14B), wherein a sum of widths of a plurality of lines including at least one electric power line formed in one line forming region is approximately the same as that the sum of widths of a plurality of lines formed in another line forming region.

6. Claims 2, 4-5 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komiya et al. (US 2003/0076046 A1 of record) in view of Yamazaki et al. (US 6, 825,820 B2 of record), hereinafter "Komiya" and "Yamazaki".

Regarding claim 2, Komiya discloses, in Figures 4-5 and page 5, par. [0067], an electro-optical device comprising a plurality of scan lines (G); a plurality of data lines (D); a plurality of pixels (Fig. 5), disposed at portions corresponding to intersections of the scan lines (G) and the data lines (D), including electro-optical devices; and a plurality of electric power lines (183) to supply driving voltage to the electro-optical devices; the plurality of pixels making up a plurality of pixel groups formed of a series of pixels arrayed in at least one direction of the row direction and the column direction (Fig. 5), a plurality of line forming regions (183, D) being formed between adjacent pixel groups of said plurality of pixel groups, and at least two lines (183, D) selected from at least one electric power line of the plurality of electric power lines (183), at least one scan line of the plurality of scan lines, and at least one data line (D) of the plurality of data lines (D), being formed in at least one line forming region of the plurality of line forming regions; and a sum of widths (183, D) of a plurality of lines including at least

one electric power line (183) formed in one line forming region is approximately the same as that of a sum of widths of a plurality of lines formed in another line forming region (183, D).

Komiya does not disclose electric power lines with different widths.

Yamazaki discloses, in Figure 1B and page 6, lines 5-15, electric power lines with different widths.

It would have thus been obvious to one having ordinary skill in the art at the time the invention was made to include the electric power lines with different widths of Yamazaki in the display device of Komiya to achieve the claimed invention, doing so would improve the brightness uniformity of the display device (col. 3, lines 62-67).

Claim 4 is rejected for similar subject matter to claim 2.

Regarding claim 5, as applied to claim 1, Komiya/Yamazaki disclose, the line forming regions being formed with generally the same width (see Komiya, lines 7-9 of par. [0076]).

Claim 12 is rejected for similar subject matter to claim 2.

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nara et al. (US 6,633,135 B2 of record) in view of Yamazaki et al. (US 6,825,820 B2 of record), hereinafter "Nara" and "Yamazaki".

Regarding claim 3, Nara discloses, in Figure 1, an electro-optical device comprising a plurality of scan lines (VG); a plurality of data lines (VD); a plurality of pixels (11), disposed at portions corresponding to intersections of the scan lines (VG) and data lines (VD) including electro-optical devices; and a plurality of electrical power

lines (VLC) to supply driving voltage to the electro-devices; the plurality of pixels (11) making up a plurality of pixel groups formed of a series of pixels arrayed in at least one direction of the row direction and the column direction, a plurality of line forming regions (VG, VLC) being formed between adjacent pixel groups of the plurality of pixel groups, and both at least one electric power line (VLC) of the plurality of electric power lines and at least one scan line (VG) of the plurality of scan lines being formed in at least one line forming region of the plurality of line forming regions.

Nara does not disclose the electric power lines with different widths.

Yamazaki discloses, in Figure 1B and page 6, lines 5-15, electric power lines with different widths.

It would have thus been obvious to one having ordinary skill in the art at the time the invention was made to include the electric power lines with different widths of Yamazaki in the display device of Komiya to achieve the claimed invention, doing so would improve the brightness uniformity of the display device (col. 3, lines 62-67).

Response to Arguments

8. Rejection of Claims 2-5 and 12 Under 35 U.S.C. 112 first paragraph:

Applicant's arguments filed 06/19/2008 have been fully considered but they are not persuasive.

Applicant argues that paragraphs [0030]-[0033] of the specification fully support claims 2-4 and 12. Specially, paragraph [0030] discloses a basic premise of the invention and paragraph [0033] explicitly states "any combination of any number of various lines is supported".

Examiner respectfully disagrees.

In paragraph [0033] of the specification, lines 3-5, states that "three combinations of two electric power lines selected from the three RGB lines Vdd can be made". As understood, the three combinations of two electric power lines selected from the three RGB lines Vdd are the combinations of $V_{dd-R}V_{dd-G}$; $V_{dd-R}V_{dd-B}$; $V_{dd-G}V_{dd-B}$. Also, in paragraph [0033], lines 6-9 states that "a scan line V_{sel} is disposed on each line forming region in the row direction, and any two lines selected from the three electric power lines Vdd and the three data line Idat are disposed on the line forming regions 31, 32, and 33 in the column direction". As understood, there is one line in row direction (scan line) and there are two lines (one power line and one data line) in column direction. There is no where in the paragraphs [0030] - [0033] teaching that "any combination of any number of various lines".

Therefore, there is no support for the limitations of claims 2-4 and 12 as set forth below and they are treated as new subject matter and have been rejected under 35 USC 112, first paragraph as discussed above.

- a) wherein at least one of the line forming regions contains lines chosen from at least two of the following groups: (1) at least two electric power lines of the plurality of electric power lines with different widths, (2) at least one scan line of the, plurality of scan lines, and (3) at least one data line of the plurality of data lines (claims 2 and 12)

b) both at least two electric power lines of the plurality of electric power lines and at least one scan line of the plurality of scan lines being formed in at least one line forming region of the plurality of line forming regions (claims 3-4).

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Inquiry

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIEU HIEN T. DUONG whose telephone number is (571)272-8980. The examiner can normally be reached on Monday - Friday, from 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W. Owens can be reached on 571-272-1662. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

10/06/08

DD

AU 2821

/Trinh Vo Dinh/

Primary Examiner, Art Unit 2821